

DT



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,727	01/23/2004	Minggao Yao	12553/127	7335

25693 7590 11/30/2004

KENYON & KENYON (SAN JOSE)
333 WEST SAN CARLOS ST.
SUITE 600
SAN JOSE, CA 95110

EXAMINER

RENNER, CRAIG A

ART UNIT	PAPER NUMBER
----------	--------------

2652

DATE MAILED: 11/30/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

DT

Office Action Summary

Application No.

10/763,727

Applicant(s)

YAO ET AL.

Examiner

Craig A. Renner

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 10/282,999.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 23 January 2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 10/282,999, filed on 28 October 2002.

Drawings

2. The drawings are objected to because of the following informalities:
 - a. The drawings fail to comply with 37 CFR 1.84(p)(5) because they include one or more reference signs not mentioned in the description. Note, for instance, "612" (shown thrice in Figure 6, for instance).
 - b. In Figure 3, reference sign "302" should be drawn to the "arm" in order to be consistent with the remainder of the disclosure.
 - c. In Figure 7, the box drawn around reference sign "702" should be removed for better clarity.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) and/or an amendment to the specification in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR

Art Unit: 2652

1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
4. The abstract of the disclosure is objected to because it is not "within the range of 50 to 150 words." Appropriate correction is required. See MPEP § 608.01(b).
5. The disclosure is objected to because of the following informality:

On page 3, the "Brief Description Of The Drawings" section does not include a brief description of Figures 8 and 9. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2652

7. Claims 11-15 and 17-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 1 in each of claims 11-15 and 17-21, "The system" is indefinite because it lacks clear and/or proper antecedent basis.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 10, 13-16 and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Shiraishi et al. (US 6,690,551).

With respect to claims 10 and 13-15, Shiraishi teaches an actuator component (51) comprising at least one layer of electrically-conductive material (includes lower-most 61, for instance); and at least one layer of electrically-insulative material (includes 60 above lower-most 61, for instance), wherein the conductive material and the insulative material are to be applied to an actuator finger (51a) one layer upon another in an alternating manner (as shown in Fig. 6, for instance); and the layer of insulative

Art Unit: 2652

material is larger in area than the layer of conductive material (as shown in Fig. 6, for instance) such that an insulative layer, applied to the actuator finger and sandwiching a conductive layer between the insulative layer and the actuator finger (as shown in Figs. 5-6, for instance), at least partially encloses and electrically isolates the conductive layer (as shown in Figs. 5-6, for instance) [as per claim 10]; wherein the insulative material is a piezoelectric ceramic material (lines 28-29 in column 7, for instance) [as per claim 13]; wherein the insulative material is lead zirconate titanate (lines 28-29 in column 7, for instance) [as per claim 14]; and wherein the actuator finger is a hard disk (10) drive micro-actuator finger (51a) [as per claim 15].

With respect to claims 16 and 19-21, Shiraishi teaches a piezoelectric actuator (51) comprising an actuator finger (51a) to receive application of at least one layer of electrically-conductive material (includes lower-most 61, for instance) and at least one layer of electrically-insulative material (includes 60 above lower-most 61, for instance), the application being one layer upon another in an alternating manner (as shown in Fig. 6, for instance), wherein the layer of insulative material is larger in area than the layer of conductive material (as shown in Fig. 6, for instance) such that an insulative layer, applied to the actuator finger and sandwiching a conductive layer between the insulative layer and the actuator finger (as shown in Figs. 5-6, for instance), at least partially encloses and electrically isolates the conductive layer (as shown in Figs. 5-6, for instance) [as per claim 16]; wherein the insulative material is a piezoelectric ceramic material (lines 28-29 in column 7, for instance) [as per claim 19]; wherein the insulative material is lead zirconate titanate (lines 28-29 in column 7, for instance) [as per claim

Art Unit: 2652

20]; and wherein the actuator finger is a hard disk (10) drive micro-actuator finger (51a) [as per claim 21].

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 11-12 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shiraishi et al. (US 6,690,551).

Shiraishi teaches the component/actuator as detailed in paragraph 9, supra.

Shiraishi, however, remains silent as to the conductive material being a "metal," as per claims 11 and 17, selected from the group "consisting of Gold, Platinum, and Copper," as per claims 12 and 18.

Official notice is taken of the fact that metal selected from the group consisting of gold, platinum and copper is a notoriously old and well known conductive material in the

Art Unit: 2652

art in the same field of endeavor. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have had the conductive material of Shiraishi be a metal selected from the group consisting of gold, platinum and copper. The rationale is as follows:

One of ordinary skill in the art would have been motivated to have had the conductive material of Shiraishi be a metal selected from the group consisting of gold, platinum and copper since such is a notoriously old and well known conductive material in the art in the same field of endeavor, and since selecting a known material on the basis of its suitability for the intended use is within the level of ordinary skill in the art, *In re Leshin*, 125 USPQ 416 (CCPA 1960).

Pertinent Prior Art

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. This includes Kurano et al. (US 6,617,762), which teaches an electrically insulated piezoelectric actuator.

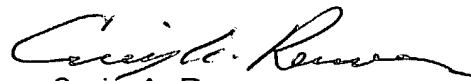
Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Craig A. Renner whose telephone number is (703) 308-0559. The examiner can normally be reached on Tuesday-Friday 7:30 AM - 6:00 PM.

Art Unit: 2652

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Craig A. Renner
Primary Examiner
Art Unit 2652

CAR